

# A student of history: perspectives on the contributions of Estelle Brodman

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**Purpose:** This paper is a reflection on the contributions of Estelle Brodman, PhD, as a historian through her publications and activities in the areas of medical history and history of medical librarianship.

**Methods:** The publication record of Dr. Brodman was reviewed to identify the resources most relevant to the history of medicine and history of medical librarianship.

**Brief Description:** As a historian, Dr. Brodman used manuscript collections to carry out original research. Publications resulting from her research and historical activities influenced her library colleagues to embrace history and brought new information to historians, scholars, and students. Dr. Brodman was the driving force behind the development of the Medical Library Association's oral history program.

## INTRODUCTION

There are many facets to Estelle Brodman, PhD. She is distinguished in each venue: librarian, scholar, teacher, historian, editor, author, friend, and mentor. The purpose of this article is to define her as a historian through her writings and activities centered in history, both in medical and in library areas. Dr. Brodman's historical papers cover a wide range of topics. Her writing flows, her words chosen with care. She can paint a picture that allows the reader to visualize exactly what she is describing. Her knowledge of history and of literature adds richness to all her work.

Dr. Brodman's undergraduate work in histology and embryology at Cornell University was preparation for medical school. When she was not admitted to any medical school, her mother suggested she become a social worker, but she responded she would rather be a librarian [1]. Dr. Brodman received a bachelor's in library science in 1936 from Columbia University, a master's degree in 1943. She served as a medical librarian at Columbia University from 1937 to 1943, including a stint as acting librarian. In this position, she was told that the administration would never make a woman the head librarian. That spurred her to study for a graduate degree [2].

Dr. Brodman was awarded a doctorate in the history of medicine from Columbia University in 1953 with her dissertation, *The Development of Medical Bibliography*, subsequently published under the same title as the first of the publication series of the Medical Library Association (MLA) [3]. The work continues to be a standard in medical reference and was her first major contribution to the history of medicine.

In addition to *The Development of Medical Bibliography*, Dr. Brodman made significant contributions to medical history and the history of medical librarianship. This paper is not intended to be a comprehensive review of her works but describes selected resources to illustrate her contributions to the history of medicine and the ways she used her interest in and knowledge of medical history to spur her colleagues to read and write on historical topics.

## Highlights

- Estelle Brodman, PhD, was a consummate medical librarian who made significant contributions to the history of medicine literature.
- Dr. Brodman was the driving force in establishing the Medical Library Association's (MLA's) oral history program.

## Implications

- Dr. Brodman leaves a legacy of historical writing that will continue to be useful to librarians, historians, and students for years to come.
- The style and substance of her historical papers serve as excellent models for student authors from medicine, librarianship, and other disciplines.
- Dr. Brodman's impact continues to be felt in MLA's oral history program and history of medicine activities.

## THE DEVELOPMENT OF MEDICAL BIBLIOGRAPHY

In the preface to her book based on her doctoral dissertation, Dr. Brodman stated that it "is the first such attempt" to develop a large-scale history of medical bibliography [4]. Undertaking to provide this history was no small task. Dr. Brodman examined all the medical bibliographies available, drawing conclusions about the place of each and providing a description of the economics and politics of the time, and noted advances in medical experimentation, the rise of clinical teaching, and the establishment of the medical periodical. The five chapters are devoted to the pioneers in the field for a particular era from 1472 through the 19th century, and each chapter includes biographical sketches of the bibliographers and a description that emphasizes the advances and importance of their works.

The eighteenth century was described by Dr. Brodman as the "Golden Age of Individual Bibliog-

raphers." The problem that has plagued bibliographers ever since was initially identified in this era: the endless flood of the literature [5]. To this day, even with greatly improved access by computer, there has never been a means of capturing *all* the medical literature and making it known in a speedy and accurate venue.

The nineteenth century was the beginning of cooperative bibliography. No longer could a single individual manage the massive numbers of medical publications. The *Royal Society Catalogue of Scientific Papers* and the *Index-Catalogue of the Library of the Surgeon General's Office* are examples of works produced by many individuals. Of particular importance to the history of bibliography were the great tools created by John Shaw Billings at the Library of the Surgeon General's Office. Dr. Brodman was at her best in describing Billings' work and his monumental *Index-Catalogue*, *Index Medicus*, and system for interlibrary loan [6].

Billings' motivation for creating the surgeon general's library and the indexes was the result of his frustration in trying to locate the sources and the information he needed. His plan was to establish a fairly complete medical library and to "prepare a comprehensive catalogue and index which should spare medical teachers and writers the drudgery of consulting ten thousand or more different indexes, or of turning over the leaves of as many volumes to find the dozen or so references of which they might be in search" [7].

The *Index-Catalogue* contained more works on any given subject than did any previous bibliography of medicine. It was Billings' decision to include in the catalog only the very best and most select publications, and he completed the work by using untrained employees to handle the massive amount of material. Dr. Brodman described in detail the development of the *Index-Catalogue*, while she was on the staff of the Army Medical Library, now the National Library of Medicine, during the period she prepared her doctoral dissertation.

Billings recognized that physicians would have to wait too long to obtain current information, for the production of the *Index-Catalogue* was exceedingly slow. In his scheme, he planned to prepare a monthly index using the materials already identified for the *Index-Catalogue*. Thus, the *Index Medicus* came into being in 1879. It was a private, monthly publication under the editorship first of Billings and Robert Fletcher, then by various editors. There were many different publishers and titles through the years. The two publications plus the system of interlibrary loan was a great achievement. William Welch stated during a meeting that honored Billings:

I question whether America has made any larger contribution to medicine than that made by Billings in building up and developing the Surgeon-General's Library and in the publication of the *Index Catalogue* and the *Index Medicus*. That in my judgment is our greatest contribution to medicine and we owe it to this extraordinary man. [8]

In the book's final chapter "The Present Situation," Dr. Brodman discussed the future of medical bibliography, indicating that the medical world must be content with a return to more haphazard knowledge of the total literature, or else an entirely new system of bibliographic control must be evolved [9].

In many respects, the computer brought this new system, and the ever increasingly sophisticated databases available today have partially answered some of the issues she discussed. Citations are now available soon after publication, and the electronic versions of the *Index Medicus* and the *Index-Catalogue* are used by physicians, scientists, students, and historians everywhere.

### Importance of *The Development of Medical Bibliography*

*The Development of Medical Bibliography* was well received in 1954 and continues to be a useful tool today. Reviews were published in major science journals such as *Nature*, *JAMA*, and *Science* as well as in library and history publications. The work was deemed worthy of scholarly treatment, and it rated a number of distinguished reviewers.

Henry R. Viets—neurologist, curator of the Boston Medical Library, and noted book reviewer—was chosen to review the book in the *Bulletin of the Medical Library Association (BMLA)*, a fitting choice for he was its editor from 1937 to 1941. Viets said, "Both the Medical Library Association, which sponsors this fine book as Publication No. 1, and the author are to be congratulated on the result" [10]. A review by E. Ashworth Underwood, director of the Wellcome Historical Medical Museum and the Wellcome Historical Medical Library in London, appeared in *Nature*. Underwood stated that Dr. Brodman had written a "valuable little book, to which is appended a very full list of medical bibliographies since 1500" [11].

Another review by W. B. McDaniel, curator of historical collections, Library of the College of Physicians of Philadelphia, appeared in the *Journal of the History of Medicine*. McDaniel said, Dr. Brodman's study, "thoughtfully organized to cover both cultural and practical aspects, appears to be the most comprehensive and technically searching one on the subject yet published" [12].

Dr. Brodman's colleague, physician and historian John F. Fulton had published a book on early medical bibliographers in 1951, *The Great Medical Bibliographers: A Study in Humanism* [13]. It covers some of the same individuals as Dr. Brodman's, but the work is not comprehensive nor is it as detailed. A comparison with the Fulton book lends credence to McDaniel's statement that her work was the first comprehensive history of medical bibliography.

### HISTORY OF MEDICINE PUBLICATIONS

Most of Dr. Brodman's articles—including her reports on international visits, teaching, and automation—contain some historical reference or perspective. She

also wrote extensively on the history of medicine. Early works from the collections of the Washington University School of Medicine Library were extensively studied by Dr. Brodman, resulting in publications.

### **Eighteenth century remedy book**

The first concerns an early manuscript found in the Washington University School of Medicine Library when staff was surveying space in the library. It was a leather-bound volume that contained remedies for diseases for both man and beast.

How this item came to the library was unknown. The story of finding the manuscript and the steps taken to unravel the contents were described in a preliminary note by Dr. Brodman and Lucille B. Pinto, who also helped with the translation [14]. The story of the search for the origin of the publication and the translation is told in the article, "Pediatrics in an Eighteenth Century Remedy Book," published in the *BMLA* [15]. What was learned about the text, brought to this country from Germany in the early 1800s, makes fascinating reading. Dr. Brodman followed the trail of the donors of the recipes, mostly herbal in nature, along with comparisons of the text with earlier works.

Two sections were distinctly labeled diseases of children and were close in tone and philosophy to the stream of manuscripts going back to classical times. Dr. Brodman observed that in some cases the remedies suggested were taken almost word for word from authors such as Galen, Avicenna, and Rhazes. The authors appeared to be women, who used none of the magic or "*Dreckapotheke*" remedies of similar works [16].

Dr. Brodman's remedy book paper displays a depth of insight and historical knowledge. Her research was a true labor of devotion and a determination to solve the mystery of the manuscript. A preliminary note was published in the *Bulletin of the History of Medicine*, bringing the attention of historians, scholars, and librarians to this hitherto unknown manuscript. Prior to its formal publication in the *BMLA*, Brodman's essay, "Pediatrics in an Eighteenth Century Remedy Book," was recognized with MLA's Murray Gottlieb Prize in 1977 for the best unpublished essay on the history of medicine and allied science.

### **The Beaumont Papers**

The Beaumont Papers manuscript collection was presented to Washington University School of Medicine Library by William Beaumont's granddaughter in 1915. Dr. Brodman organized the collection and used these original resources to publish three articles; the one published in 1985 marked the bicentennial of Beaumont's birth.

William Beaumont (1785–1853) was an army surgeon stationed at Fort Mackinac in the Michigan Territory when an incident occurred that brought him fame. In 1822, he was called to assist a French Canadian, Alexis St. Martin, who had sustained an accidental gunshot wound that tore off a large portion

of his side, leaving a gastric fistula. Despite the severity of the wound, St. Martin survived. The wound eventually healed but left the fistula.

In 1825, Beaumont began a series of experiments with St. Martin to study the process of digestion. He suspended various foods by silk string into St. Martin's stomach to record the movements of the stomach during digestion and the effects of gastric secretion. His book, *Experiments and Observations on the Gastric Juice and the Physiology of Digestion*, was published in 1833. Beaumont is considered the United States' first experimental physiologist, for he revolutionized the knowledge of gastric digestion [17].

A year-long Beaumont celebration was heralded in 1985 by the first issue of the Federation of American Societies for Experimental Biology (FASEB) journal, *Federation Proceedings*, that included Dr. Brodman's article on Beaumont and the transfer of biomedical information. [18].

Studying the work of Beaumont emphasized for her the seamless fabric of biomedical advances, where new information is built on what has been uncovered earlier, which in turn leads to further information discovery. These two aspects of the work of Beaumont—what he was able to learn from his predecessors on the physiology of digestion and how he was able to influence those who came after him—point up sharply the importance of the transmission of scientific information to the advancement of the field.

In her *Federation Proceedings* article, Dr. Brodman examined the story of St. Martin and his treatment by Beaumont and related it to the transfer of biomedical information. Beaumont's works received far more recognition in Europe than in the United States. His first articles were published in the *Medical Recorder* and were picked up in the German review and abstracting journal, *Magazin der auslaendischen Literatur der gesammten Heilkunde*. The articles in the German journal were reported in both British and French journals. The Germans had developed the most important series of indexing, abstracting, and reviewing journals in medicine of any country. Dr. Brodman outlined the German system and the ways Beaumont's works were communicated to scientists in other countries through this mechanism. Thus, the "transfer of biomedical information" spread throughout the world [19].

Dr. Brodman's paper, "Scientific and Editorial Relationships between Joseph Lovell (1788–1836) and Beaumont," published new information on Lovell, the surgeon general of the United States Army from 1818 until his death in 1836. He made many changes and improvements in the department, requiring all medical officers to submit quarterly reports of the weather and including incidence, prevalence, and causes of disease in their reports. The weather reports formed the historical beginning of the weather bureau, but Lovell is primarily remembered for three contributions: he spoke out strongly about the evils of alcoholism; he was chiefly responsible for the abolition of the rum ration for soldiers; and he supported Beaumont in carrying out



his experiments on St. Martin and publishing the results [20].

To organize the Beaumont collection, Dr. Brodman read through the entire file of about a thousand documents and discovered the Beaumont-Lovell correspondence, which indicated that Lovell was much more mentor to Beaumont than had been thought before. Lovell introduced Beaumont to other scientists and in the correspondence was a letter to Lovell from Robley Dunglison, professor of physiology at the University of Virginia, that implied an original letter from Lovell to Dunglison requesting aid for Beaumont [21]. Lovell read the manuscript of Beaumont's book and assisted in getting it published. Beaumont recognized Lovell's support by dedicating the book to Lovell for a "long tried and unvarying friendship" [22]. Dr. Brodman concluded her paper by indicating that:

Lovell was important in the scientific achievements of the backwoods surgeon, who so needed advice and encouragement in his extraordinary work, and who was able to look up to his advisor and thus take the advice in the best spirit. Beaumont has been praised often for his pioneering work—and rightly so—but the credit due to Lovell in stimulating this work should also be noted. [23]

A third article, "William Beaumont as a Physician," describes Beaumont as typical of the practitioner of his day, an "average" physician whose life is both interesting in itself and as a mirror of the total milieu around him [24]. The article provided insights into the diseases and treatments of the period. One segment concerned the treatment of cholera that struck St. Louis in 1849, having come by way of ships from New Orleans. Dr. Brodman gave a vivid description of the treatments Beaumont used: "friction to increase circulation, opium and ether as muscle relaxants, and the ubiquitous calomel, cupping, and bleeding to rid the body of the morbid matter" [25].

Dr. Brodman's research using the Beaumont Papers and the subsequent lectures and publications gained recognition for her in both medical and history of medicine communities.

## EDITORIALS, BOOK REVIEWS, AND OBITUARIES

History was never far from Dr. Brodman's mind. Whatever she wrote would include some historical content. Her knowledge was of such depth that she could fit an ancient author or subject to any theme she chose to develop.

Her many editorials, book reviews, and obituaries were all rich in language and style. A search of the PubMed Central database identified fifty book reviews by Dr. Brodman. Another fifteen were published in a variety of journals including *Library Journal*, *Library Quarterly*, *Papers of the Bibliographical Society of America*, *Bulletin of the History of Medicine*, *College and Research Libraries*, *Journal of the History of Medicine and Allied Sciences*, and *Journal of Automation*.

One book review must have greatly disappointed the author, Charles Harvey Brown. His book—

*Scientific Serials: Characteristics and Lists of Most Cited Publications in Mathematics, Physics, Chemistry, Geology, Physiology, Botany, Zoology, and Entomology*—was based on the number of journals cited in these various fields. This process was described by Paul Gross and E. M. Gross in an article in *Science* in 1944 [26] and refuted by Dr. Brodman in her paper, "Choosing Physiology Journals," published in the *BMLA* in 1944 [27] and based on her master's thesis at Columbia University. She similarly challenged Brown's reasoning and concluded with this biting statement: "Any reference book published by a group of librarians which does not have an index is a disgrace. This book does not have an index" [28].

Dr. Brodman edited forty issues of the *BMLA*. Each issue included editorials written by members of the editorial staff. On certain occasions, Dr. Brodman signed an editorial. At the end of her term as editor, she wrote an editorial, "Hail and Farewell," stating that editing *MLA's* journal had been "a heart-warming and soul-stretching experience." Dr. Brodman's goals for the *BMLA* were to make it an organ for reflecting the contemporary professional scene; to put before its readers the newer advances in the field; and to present the profession in relation to other disciplines and other forces of society, not *in vacuo* [29].

Janet Doe, librarian of the New York Academy of Medicine Library, praised Dr. Brodman in a second editorial published in the same issue, stating the "Association was particularly happy in appointing as its editor Estelle Brodman whose abilities, experience, and taste made possible the embodiment in the *Bulletin* of the profession's own growth" [30].

Long before she was awarded the Murray Gottlieb Prize in 1977, Dr. Brodman wrote an editorial in which she exhorted medical librarians to utilize the archives in their institutions to write historical papers. She cited the topics of the first three prize winners as examples of such use: "A study of the provision of medical care among a religious group in the late 18th and early 19th centuries, a description of community efforts to handle a local cholera epidemic, and the tracing of a pioneer attempt at local medical education." Medical history must be studied from all angles and at all levels, as these examples show [31].

Dr. Brodman also contributed obituaries and related articles to the *BMLA*. An extensive memoir of Fletcher provides insights not available elsewhere. Fletcher was a long-time member of the staff of the Library of the Surgeon General's Office and colleague of Billings. In 1876, Fletcher was ordered to report to Billings at the library, and he spent the last thirty-six years of his life in that position. With his work with Billings on the *Index-Catalogue*, Fletcher had found his mission, and he continued to edit the index after Billings left the library [32].

## LIBRARY HISTORY

Not only did Dr. Brodman write articles on medical history, she published on issues of library history. For example, her article "Medical Periodicals" includes a

description of the growth of medical journals from the 1600s to the 1960s. She notes the continuing problems of cost of publication and distribution, the expansion of specialties in medicine, and the growth of research with the accompanying volume of publication. Reading the article today makes one realize how the issues in journal publication continue in the same vein—economics, social forces, and medical research and practice [33].

The April 1957 issue of *Library Trends* was devoted to subject bibliographies. Dr. Brodman and Miwa Ohta wrote the segment on medical literature, beginning with an explanation of the changes in medicine after World War II from discipline-oriented research to problem-oriented research and the addition of new technologies. The authors pointed out the curious fact that in the library world the Dewey decimal system, not frequently used in medical libraries, is “problem” oriented and the Library of Congress system is “discipline” oriented. [34].

Other factors noted in the article as influencing the development of medical bibliography were the flood of new journals based on individual practice or disease fields such as *Gut* or *Arthritis and Rheumatism*. Another was the growth of science in other countries—growth that overwhelmed existing bibliographic tools, making the arrival of computers such a milestone for both librarians and scientists [35].

This paper was published in 1967, shortly before the advent of the first online bibliographic database, the Biomedical Communication Network (BCN), became a reality.

## ORAL HISTORY

Oral histories are a valuable component of the archives and records of any institution or organization. MLA’s interest in developing an oral history program started in 1977, and, by September 2007, seventy-five oral histories in the MLA program\* had been completed.

In 1980, the National Library of Medicine made a 3-year grant of just under \$10,000 to the association to continue the program, with Nancy W. Zinn, FMLA, as principal investigator and Dr. Brodman as co-princi-

pal investigator. The tapes were indexed at the Washington University School of Medicine Library under the aegis of Dr. Brodman until her retirement in 1981 [36].

Dr. Brodman’s 1980 study of three outstanding librarians and former presidents of MLA (Mary Louise Marshall, Janet Doe, Bertha B. Hallam) provided an example of the value of organizational oral histories [37]. The study examined the motivations to become librarians and the means by which the interviewees obtained their library training. A second purpose of the study was to indicate some of the ways in which the oral histories could be used to yield generalized information that would be useful to historians of the profession. Dr. Brodman discussed these interviews in light of the “revisionist” theory of librarianship, which explained the entrance of women into the field in large numbers as due to the expansion of higher education among women at the time, while simultaneously only a few professions were socially acceptable for such women [38]. Dr. Brodman stated that this premise was at least partially correct but did not give any evidence that library training was framed to allow women graduates to administer libraries or to consider very deeply the intellectual bases or social purposes of libraries; thus, women were often trained only for lower or mid-level library positions. Dr. Brodman recommended further investigation on such questions.

Dr. Brodman was a strong advocate for MLA’s program and promoted her views in a 1981 article [39]. She outlined the list of individuals to be interviewed earliest, noting why it was essential to interview librarians connected with the association and to document advances in the field. Dr. Brodman stated, “almost any topic which has agitated medical librarianship in the past half-century can probably be found discussed” in these oral history tapes, including the first *Handbook of Medical Library Practice*, the role of the National Library of Medicine, the impact of World War II on receipt of foreign journals, setting up of a paid central office, certification, and the impact of automation [39]. She encouraged librarians to do research using the tapes to gain insights into what “our predecessors did; how they were influenced and by what; what they hoped to accomplish and how they went about doing it; as well as what impact this has had on present day libraries and librarians.” She added, “The history of ideas in librarianship is no less worthy of study than the history of ideas in biomedicine, astronomy, or politics” [40].

## HISTORY OF MEDICINE ACTIVITIES AND HONORS

In addition to her activities in the history of medicine research and her publications, Dr. Brodman was an active member of the American Association for the History of Medicine and served on its council 1967 to 1969. She taught a required course on the history of medicine for second-year students at Washington University School of Medicine for several years and

\* The Medical Library Association’s (MLA’s) oral history program was first proposed in 1977 and initially funded in 1980, with a three-year grant from the National Library of Medicine <[http://www.mlanet.org/about/history/oral\\_history.html#8](http://www.mlanet.org/about/history/oral_history.html#8)>. Original taped interviews and transcripts are retained in the MLA Archives and made available for research. Edited copies of the transcripts including an interview summary, biographical sketch, and table of contents are available through the National Network of Libraries of Medicine <<http://www.nlm.nih.gov/network.html>>. By arrangement with MLA, the full-text transcript of Estelle Brodman’s oral history and biographical sketch are available at Washington University School of Medicine Bernard Becker Medical Library <<http://beckerexhibits.wustl.edu/oral/transcripts/brodman1978.html>, <http://beckerexhibits.wustl.edu/oral/transcripts/brodman1981pt1.html>, and <http://beckerexhibits.wustl.edu/oral/transcripts/brodman1981pt2.html>>.

later had students in independent study undertaking history of medicine topics.

Dr. Brodman received many honors during her career, including two related to the history of medicine. The Archivists and Librarians in the History of Medicine presented her the first Lisabeth M. Holloway Award in 1993 for "outstanding service to the association since its conception and her contributions in significant ways to the development of the organization and to many of its members" [41]. As noted earlier, she received MLA's Murray Gottlieb Prize in 1977.

## CONCLUSION

Estelle Brodman was a major influence on the growth of medical librarianship and a valued mentor and friend to many librarians, including this author. She continues to be a force through her publications, because they both challenge the reader and display her amazing intellect. Many are timeless and will be used and appreciated by librarians for years to come.

Dr. Brodman's lectures and publications relating to the history of medicine provided new information gleaned from the manuscripts held in the Washington University School of Medicine Library or the published bibliographies she so ably surveyed in her classic work, *The Development of Medical Bibliography*. She encouraged her colleagues to study and write on historical topics, to carry out oral histories in their institutions, and to become students of history. Dr. Brodman left a rich legacy of works in the history of medicine. In her words, "as a student of history, I find that a study of the past often illuminates the meaning of the present and indicates logical possibilities for the future" [42].

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